REMARKS

Claims 1-25, as amended, and new claims 26-33, are pending in this application. In this Response, Applicants have amended certain claims. In light of the Office Action, Applicants believe these amendments serve a useful clarification purpose, and are desirable for clarification purposes, independent of patentability. Accordingly, Applicants respectfully submit that the claim amendments do not limit the range of any permissible equivalents.

In particular, independent claims 1 and 19 and dependent claims 8, 20, and 25 have been rewritten to further clarify the invention. New claims 26-33 recite additional embodiments of the invention fully supported in the Specification. As no new matter has been added by the amendments herein, Applicants respectfully request entry of these amendments at this time.

THE REJECTIONS UNDER 35 U.S.C. § 112

Claims 1-18 were rejected under 35 U.S.C. § 112 as being indefinite for the reasons stated on page 2 of the Office Action. While Applicants disagree that the phrase "at least about" renders the claims indefinite, claims 1, 8, and 19-20 have been rewritten to remove the language of concern to the Examiner to expedite allowance of this application.

In light of the amendments herein, Applicants respectfully submit that the § 112 rejections of claims 1-18 are moot.

THE REJECTIONS UNDER 35 U.S.C. § 102

Claims 1-4 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,713,801 to Aoyama in view of Examiner Official Notice for the reasons stated on pages 2-3 of the Office Action.

Aoyama is directed to a golf ball having a solid core, a wound layer, and a cover. *See, e.g.*, Col. 2, lines 41-48. The present invention requires a binding material applied to the hoop-stress layer to increase the cross-sectional area of the hoop-stress layer, as presently recited in amended claim 1. As stated on page 5 of the Office Action, Aoyama does not disclose or suggest a binding material used to coat the hoop-stress layer and, therefore, Aoyama is missing an element of the presently recited invention.

In light of this missing element, Applicants respectfully submit that Aoyama does not anticipate the present invention as recited in claim 1. Thus, Applicants respectfully request reconsideration and withdrawal of the § 102 rejection of claims 1-4.

THE REJECTIONS UNDER 35 U.S.C. § 103

Claims 8-25 were rejected under 35 U.S.C. § 103(a) as being obvious over Aoyama in view of U.S. Patent No. 5,919,100 to Boehm *et al.* and Examiner Official Notice for the reasons stated on pages 3-6 of the Office Action. In addition, claims 5-7 were rejected under 35 U.S.C. § 103(a) as being obvious over the references applied in claim 1, and in further view of U.S. Patent No. 5,913,736 to Maehara *et al.* and U.S. Patent No. 4,938,471 to Nomura *et al.* for the reasons stated on pages 6-7 of the Office Action.

As discussed above, Aoyama is completely silent as to at least one feature recited in all of independent claims of the present invention: the binding material. Thus, Aoyama does not anticipate or render obvious the present invention. The Examiner has cited Boehm in an attempt to cure the deficiencies of Aoyama with respect to certain material properties and layer construction. Boehm, however, also lacks the binding material, among other claim elements, and, therefore, does not cure the deficiencies of Aoyama.

Boehm is directed to a golf ball having a fluid mass at the center of the ball, first and second non-wound layers, and a cover. *See* Abstract. Boehm is completely silent as to the requisite core layer of resilient elastomeric material, the wound hoop-stress layer, and the binding material. In fact, Boehm teaches a solid-non-wound core portion made of at least a first, solid, non-wound layer 20 surrounding the fluid filled center and a second, solid, non-wound layer 22 surrounding the first layer 20. *See, e.g.*, Col. 7, lines 14-25 and 36-40. There is no disclosure or suggestion of a solid core, a hoop-stress layer, or a binding material in Boehm's ball.

The Examiner suggested that Boehm discloses suitable reactive liquids that are equivalent to the presently recited binding material. The reactive liquids disclosed by Boehm are clearly intended for use in the cavity 18 (Col. 9, lines 25-30) and Boehm does not even suggest these materials for use outside of the cavity 18. In light of Boehm's silence as to a hoop-stress layer, it follows that the reference is also completely silent as to using a binding material as a coating for the strand(s) of the hoop-stress layer. One of ordinary skill in the art would not have had any motivation to combine

the Boehm cavity materials with the Aoyama wound layer to arrive at a coated strand without the present invention to use as a template, which is a classic case of hindsight.

Maehara and Nomura have been cited in an attempt to cure the deficiencies of the primary references pertaining to claims 5-7. Maehara is directed to a golf ball with a shape memory alloy layer and Nomura is directed to winding techniques. Applicants respectfully submit that no combination of Maehara and Nomura is able to cure the deficiencies of the primary references discussed above.

For at least these reasons, Applicants respectfully request reconsideration and withdrawal thereof as to the rejections under 35 U.S.C. § 103 as to claims 8-25.

THE PROVISIONAL DOUBLE-PATENTING REJECTION

Claims 1 and 19 were provisionally rejected based upon U.S. Patent Application No. 09/841,910 under the judicially created doctrine of obviousness-type double patenting. Applicants submit herewith a Terminal Disclaimer in compliance with 37 CFR § 1.321(c). Thus, Applicants respectfully request reconsideration and withdrawal of the double patenting rejection.

CONCLUSION

All claims are believed to be in condition for allowance. If the Examiner believes that the present amendments still do not resolve all of the issues regarding patentability of the pending claims, Applicants invite the Examiner to contact the undersigned attorneys to discuss any remaining issues.

A Fee Sheet Transmittal is also submitted herewith to pay for the Terminal Disclaimer as required under 37 CFR § 1.20(d), as well as the additional independent and dependent claims added with this Response.

No other fees are believed to be due at this time. Should any fee be required, however, please charge such fee to Swidler Berlin Shereff Friedman, LLP Deposit Account No. 195127, Order No. 20002.0031.

Respectfully submitted,
SWIDLER BERLIN SHEREFF FRIEDMAN, LLP

Dated: August 16, 2002

By: _____

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APPENDIX A
MARKED UP VERSION OF AMENDED SPECIFICATION PARAGRAPHS

Please replace the paragraph on page 13, lines 8-15 as follows:

If the outer most thermoset layer is too thick, this layer will contribute to the in-flight characteristics related to the overall construction of the ball and not the surface properties. If the outermost thermoset layer is too thin, however, it may not be durable enough to withstand repeated impacts by the golfer's clubs. Specifically, it has been determined that the outer cover layer should have a thickness of greater than about 0.065 inches, preferably greater than about 0.08 inches, and more preferably greater than about [01] 0.1 inches.

APPENDIX B

MARKED UP VERSION OF AMENDED CLAIMS

Please amend the claims as follows:

1. (Amended) A golf ball having three or more concentrically disposed layers, which comprises:

a core of at least one layer comprising at least one resilient elastomeric material;

a hoop-stress layer wound or wrapped about the core comprising at least one hoop-stress material having a tensile elastic modulus of [at least] about 10,000 kpsi or greater and a first cross-sectional area [wound or wrapped about the core], wherein a binding material is applied to the at least one hoop-stress material and activated to increase first cross-sectional area by about 5 percent or greater; and

an outermost thermoset material of at least one layer disposed about the hoop-stress layer [and having a thickness of greater than about 0.065 inches and a dimpled outer surface].

8. (Amended) The golf ball of claim 1, wherein the at least one hoop-stress material has a tensile elastic modulus of [at least] about 20,000 kpsi or greater.

19. (Amended) A golf ball having four or more concentrically disposed layers, which comprises:

a core of at least one layer comprising at least one resilient elastomeric material;

a hoop-stress layer comprising at least one wound material, having a tensile elastic modulus of [at least] about 10,000 kpsi or greater, disposed about the core, wherein the at least one wound material forming the hoop-stress layer has a first cross-sectional area and is coated with a binding material [layer] prior to winding to create a second cross-sectional area greater than the first; and

an outermost thermoset material of at least one layer, having a dimpled outer surface, disposed about the [binding material layer] hoop-stress layer.

20. (Amended) The golf ball of claim 19, wherein the at least one wound material has a tensile elastic modulus of [at least] about 20,000 kpsi or greater.

25. (Amended) The golf ball of claim 19, wherein the at least one layer of an outermost thermoset material has a [thickness of greater than about 0.08 inches] hardness of about 30 to about 80 Shore D.

Please add the following new claims:

26. (New) The golf ball of claim 1, wherein the binding material is activated by heat, pressure, chemical treatment, photo-activation, or a combination thereof.

27. (New) A golf ball comprising:

a core comprising at least one resilient elastomeric material;

a hoop-stress layer disposed about the core comprising at least one strand having a first cross-sectional area;

a binding material applied to the at least one strand to increase the first cross-sectional area by about 5 percent or greater; and

a cover comprising at least one thermoset material.

28. (New) The golf ball of claim 27, wherein the hoop-stress layer has a tensile elastic modulus of about 10,000 kpsi or greater.

29. (New) The golf ball of claim 27, wherein the binding material is activated by heat, pressure, chemical treatment, photo-activation, or a combination thereof.

30. (New) The golf ball of claim 27, wherein the binding material is activated after the hoop-stress layer is disposed about the core.

31. (New) The golf ball of claim 27, wherein the hoop-stress material comprises at least one shape memory alloy having a specific gravity of about 7.6 or greater.

32. (New) The golf ball of claim 27, wherein the at least one thermoset material comprises polybutadiene, natural rubber, styrene butadiene rubber, isoprene, urethane, or combinations thereof.

33. (New) The golf ball of claim 27, wherein the cover has a hardness of about 40 to about 75 Shore D.